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ABSTRACT

A survey was conducted with 166 undergraduate students enrolled in teacher education and developmental reading classes to determine student background knowledge in three major areas: study and coping skills; current events, geography, and history; and general vocabulary. Among the findings were the following: (1) Students in both groups spent more time reading than watching television; however, they selected television over newspapers as their primary source for learning about news events. (2) Both groups reported that pictures and graphs were types of visual aids most commonly used in their textbooks. (3) While students in both groups could identify types of visual aids used in their textbooks, the students in the developmental reading group had less accuracy and memory for various types of visual aids. (4) Students in both groups indicated the use of rereading; relating the known to the unknown, or personalizing the information; paraphrasing; and visualizing as the most helpful strategies to "make sense" out of their reading; and (5) Students in the teacher education group were more knowledgeable in the areas of history, geography, and current events. (Appended are responses for selected questions from the general reading habits section and current events section of the survey.) (HOD)

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A Comparison Study of Background Knowledge of College Undergraduates Enrolled in Teacher Education Classes With Developmental Reading Classes

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Overview:

This study discusses the results of a survey conducted with students enrolled in teacher education and developmental reading classes. The purpose of the study was to determine student background knowledge in three major areas: (1) study and coping skills; (2) current events, geography, and history; and (3) general vocabulary which normally appears in sixth grade basal readers.

Rationale and Statement of the Problem:

Background knowledge of a topic increases readers' ability to understand and recall information from text and to fill in the gaps for information not completely mentioned in the text (Alvarez, 1983; Bransford, 1979; Risko & Alvarez, 1982; Risko & Alvarez, 1983). Often college students are required to read and interpret various types of information and it is asssumed that they have been prepared prior to college entrance to cope independently with these materials. A study conducted by Drabin-Partenio & Maloney (1982) found that college students assigned to remedial classes were significantly underprepared to cope with the courses they were required to take because of limited background knowledge. This study attempted to evaluate several aspects of prior knowledge of students enrolled in teacher education and developmental reading classes.

Sample and Materials:

The sample for this study consisted of 166 students, 92 of which were assigned to developmental reading classes. All of these students had scored below the 47th percentile on the Nelson-Denny Reading Test. The subjects ranged in age from 17 to 40.

The developmental reading group consisted of 78 college freshmen, 7 sophmores, 4 juniors, and 2 seniors. The teacher education group was comprised of 1 sophmore, 30 juniors, 41 seniors, and 2 categorized as others.

The survey was designed to elicit information in three areas: (1) general habits (e.g., reading, viewing, listening, studying, and coping with textbooks); (2) American history and civics, current events, and geography; and (3) vocabluary (definitions, and use of context).

The first part of the survey assessed reading and studying behaviors. A set of forced-choice and open-ended questions asked students to describe how their reading habits and the ways that they coped with their textbook readings.

Questions concerning current issues were written to reflect national events prominently featured in newspapers, magazines, and discussed on radio and television. Questions on topics taken from U.S. social studies textbooks at the middle and senior high school levels were written to assess knowledge of American history and civics. This portion of the survey was similar to the survey used by Drabin-Partenio & Maloney.

The third section of the survey consisted of two parts. On part one students were asked to select the best definiton for

ten vocabulary words. On part two students were required to use context clues to identify meanings of ten words. The Vocabulary Subtest, 6th grade level, of the Ginn Reading Program (1983) was used for this section of the survey.

Students were asked to complete the survey carefully and anonymously.

Findings

Table 1 indicates selected questions and responses for the first part of the survey concerning general reading habits of the students.

INSERT TABLE 1 ABOUT HERE

An analysis of responses from developmental reading and teacher education students on the variable of general reading habits revealed specific trends in (1) their use of time, (2) their knowledge of parts of textbooks, and (3) their use of reading strategies. On the assessment of their use of time (Q1, Q2, and Q3), students in both groups indicated that they spend more time reading than watching television. However, they selected television over newspapers as their primary source for learning about news events.

Some similarities and differences were noted in the analysis of questions 6, 9, 10, and 12 pertaining to student knowledge of the use and purpose of parts of textbooks and resource materials. The index, glossary, and table of contents were selected by both groups as the most helpful parts of textbooks. Students in both

groups reported that pictures and graphs were types of visual aids used most commonly in their textbooks. Charts were also reported to a high degree by students in the teacher education group. Fifty-four percent of the students in the developmental reading group, as compared to 2% of the students in the teacher education group, responded incorrectly or were unable to identify types of visual aids. While students in both groups could identify some types of visual aids, the students in the developmental reading group had less accuracy and memory for various types of visual aids. Fifty-nine percent of the students in the developmental reading group could describe the purpose of the preface as compared to eighty-eight percent of the students in the teacher education group. Conversely, 18% of the developmental reading students could identify correctly the purpose of a thesaurus as compared to 72% percent of the teacher education students.

These preferences were noted among the students response to questions that assessed use of reading strategies (Q4, Q5, Q7, Q8, Q11, Q13, Q14, Q15, Q16). Both groups reported that the strategies that they used most often prior to beginning an assigned reading were reading the title and surveying the chapter. When unable to understand their reading, students in both groups indicated that they relied on the strategies of rereading, asking a classmate and/or teacher, or looking in another book. Similarly, students in both groups indicated the use of rereading, relating known to unknown or personalizing the information, paraphrasing, and visualizing as the most helpful strategies to "make sense" out of their reading. When using a

pencil or pen while reading, students indicated that they underline and take notes.

To determine meanings of unknown words, the predominant choice by students in both groups was the use of the dictionary or glossary. The use of context clues to determine meanings of unknown words was selected by more of the students in the teacher education group (30%) than in the developmental reading group (9%). Two percent of the students in the developmental reading group reported that they used a "backward build up" strategy. This was defined as the procedure of circling the unknown word, dividing it into syllables, and writing it backwards. There is no way to determine where such a strategy was learned since the responses were anonymous.

Varied responses were noted on study habits. Students in the developmental reading group indicated that they reread a chapter more often than students in the teacher education group. Numerous strategies that aid organization of thoughts while reading were identified by students in each group.

The assessment of knowledge of history, geography, and current events is reported in tables 2 and 3. The percentages of correct answers by category are given in table 2.

INSERT TABLE 2 ABOUT HERE

The developmental reading students differed from the teacher education students across all categories. Students in the teacher education group were more knowledgeable in all

categories than those in the developmental reading group. However, even though the students in the teacher education group demonstated more knowledge of this content, they scored below 70% accuracy in each category.

The specific patterns of responses for each question are given in table 3.

INSERT TABLE 3 ABOUT HERE

The findings of student performance on the vocabulary sections of the survey are reported in table 4.

INSERT TABLE 4 ABOUT HERE

Knowledge of vocabulary was measured in two ways on the last section of the survey. As stated earlier, these words were taken from a sixth grade basal series. First, students were given ten vocabulary words and were asked to select a definition for each word from four choices. While the students in the developmental reading group had difficulty with this portion of the survey (45% accuracy), the students in the teacher education group only achieved 74% accuracy.

Second, students were given ten different vocabulary words in context, and were asked to select a corresponding definition. Students in the developmental group improved their perfomance when words were given in context as opposed to isolation. Likewise, students in the teacher education group did better when the words were in context.

Conclusion:

We cannot assume that students entering our classes come prepared with a contextual framework that will aid assimilation of ideas presented either through lecture or textual readings. Students entering developmental reading and teacher education programs may lack essential study habits and be unaware of varied resources to aid their studying (e.g, visual aids, thesaurus). Also, students who do not possess basic knowledge in history, geography, and current events may be unable to proceed to a higher level of learning in these and related areas. Knowledge of vocabulary (beyond the sixth grade level) seems to be a minimum requirement for all college students. Also, if prospective teachers have poorly developed vocabularies, it is unlikely that they will be able to instill this knowledge in the students that they teach.

College instructors need to be aware that students may lack the appropriate background knowledge needed to cope with information presented in class or in asssigned readings. It is necessary that college instructors be informed on the techniques designed to "bridge the gap" prior to assigning chapters. Instructors should be knowledgeable on the use of teaching strategies such as prereading activities, the active use of visual aids, and study guides, to facilitate their students' learning. Perhaps the main challenge of the 80's may well be the instruction of college personnel in the use of techniques for reading in their subject matter areas.

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TABLE 1

RESPONSES FOR SELECTED QUESTIONS FROM GENERAL READING HABITS SECTION OF SURVEY REPORTED IN PERCENTAGES

Questions	Developmental Reading Students		Teacher Education Students	
1. How many hrs./wk. do you spend reading? (not including required reading by professors)	0	20	0	3
	1-5	56	1-5	55
	6-10	14	6-10	28
	11-20	9	11-20	12
	21-24	0	21-24	0
	25-30	0	25-30	0
	Over 30	1	over 30	1
2. On the average, how many hrs./wk. do you spend watching television?	0	3	0	1
	1-5	31	1-5	29
	6-10	30	6-10	30
	11-20	21	11-20	29
	21-24	1	21-24	1
	25-30	7	25-30	8
	31-40	4	31-40	0
	41-50	1	41-50	1
	over 50	1	over 50	0
3. What is your primary source for learning about news events?	TV	51	TV	52
	Newspaper	27	Radio	30
	Radio	20	Newspaper	18
4. On the average, how many times do you read a chapter once it has been assigned in your textbook?	1	37	1	69
	2	61	2	28
	3	3	3	3
5. When you open the page to the chapter of an assigned reading in the textbook, what is the first thing that you do?	Read title	37	Survey chapter	41
	Survey	35	Read title	29
	Begin reading	13	Begin reading	22
	Read chapter introduction	12	Read summary	2
	Look over page and read	3	Read study questions	2
			Look at pictures	2

Questions	Developmental Reading Students		Teacher Education Students	
*6. List the parts of the textbook that are most helpful to you.	Table of contents	16	Table of contents	20
	Preface	5	Preface	2
	Glossary	25	Glossary	22
	Index	34	Index	36
	Headings	5	Headings	7
	Content	3	Content	2
	Introduction	5	Summaries	10
	Chapter Summary	6	Questions	2
	End of chapter questions	3		
*7. As you are reading the textbook, what do you do to help you organize your thoughts?	Take notes	18	Take notes	11
	Outline	7	Outline	16
	Summarize	0	Summarize	2
	Eliminate distractions	5	Eliminate distractions	5
	Reread	7	Reread	5
	Concentrate on reading	15	Concentrate on reading	2
	Underline or highlight	13	Underline or highlight	30
	Visualize author's message	6	Visualize author's message	2
	Read headings	2	Read headings	8
	Ask myself questions	11	Relate to what I know	6
	Recite	5		
	Read carefully and slowly	6		
	Relax my body	1		
	Memorize	6		
*8. What do you do when you don't understand what you are reading?	Reread	48	Reread	50
	Ask classmate/ teacher	36	Ask classmate/ teacher	26
	Read until I understand	14	Look in another book	19
	Look in another book	1	Outline	4
	Ask myself questions	1		

Questions	Developmental Reading Students		Teacher Education Students	
9. What is a Thesaurus?	Correct	18	Correct	72
	Incorrect	82	Incorrect	28
10. What is the purpose of the preface?	Correct	59	Correct	88
	Incorrect	41	Incorrect	12
*11. What do you do to "make sense" out of what you are reading?	Reread chapter	24	Reread chapter	23
	Paraphrase	9	Paraphrase	11
	Visualize the information	12	Visualize the information	11
	Pretend to be the character	3	Put myself in situation	6
	Tell someone else what I have read	9	Recite	3
	Put myself in situation	27	Read slowly	9
	Recite	12	Relate to something already known	33
	Summarize sentence or paragraph	3	No response	6
	No response	21		
*12. List the types of visual aids that are commonly used in your textbook.	Pictures	20	Pictures	34
	Tables	0	Tables	2
	Graphs	12	Graphs	23
	Charts	6	Charts	22
	Figures	1	Figures	1
	Maps	7	Maps	6
	Cartoons	1	Cartoons	2
	Diagrams	0	Diagrams	8
	No response	20	No response	0
	Incorrect response	34	Incorrect response	2
13. How often do you read and utilize the visual aids presented in your textbooks?	Never	6	Never	2
	Seldom	12	Seldom	6
	Occasionally	35	Occasionally	47
	Frequently	40	Frequently	33
	Always	7	Always	13

Questions	Developmental Reading Students		Teacher Education Students	
14. When reading your textbook, do you have a pencil or pen in your hand?	Yes	71	Yes	89
	No	29	No	11
*15. Why do you use a pencil or pen while reading?	Underline	34	Underline	68
	Take notes	19	Take notes	18
	Mark specific parts of paragraph	5	Make notes in margin of textbook	5
	Outline	9	Mark specific parts of paragraph	2
	Circle	3	Outline	2
	No response	30	No response	6
*16. When you are reading your textbook and come upon a word you don't know what do you do to find the meaning of this unknown word?	Use dictionary	61	Use dictionary	50
	Use context clues	9	Use context clues	30
	Ask friend/ teacher	4	Ask friend/ teacher	3
	Refer to glossary	19	Refer to glossary	17
	Sound it out	1	No response	0
	Keep on reading till I grasp the meaning	2		
	Backward buildup	2		
	No response	3		

*Open ended question. Student could provide more than one answer.

TABLE 2
PERCENTAGES OF CORRECT SURVEY ANSWERS BY CATEGORY

College Class	Categories of Questions: Historical Dates	History	Current Events	Geography
Teacher education students	68	64	61	64
Developmental reading students	35	40	21	23

TABLE 3

RESPONSES FOR QUESTIONS FROM AMERICAN HISTORY AND CIVICS CURRENT EVENTS, AND GEOGRAPHY SECTION OF SURVEY REPORTED IN PERCENTAGES

Questions	Developmental Reading Students		TEACHER EDUCATION STUDENTS	
History	CORRECT	INCORRECT	CORRECT	INCORRECT
1. Who was president before Jimmy Carter?	66	34	78	22
2. How many senators are in the U.S. Senate?	27	73	42	58
3. What are the three branches of the Federal Government?	34	66	76	24
4. Who invented the telephone?	68	32	95	5
5. In what year will the next presidential election take place?	74	26	88	12
6. Name the state where the Battle of Saratoga was fought.	2	98	26	74
Current Events				
7. Who is the Vice President of the United States?	30	70	72	28
8. In what field do we associate the following terms: BASIC, COBOL, ASSEMBLY, SAS?	21	79	64	36
9. Name the country whose jet airliner was shot down by the Soviet Union?	2	98	69	31

Questions	Developmental Reading Students		TEACHER EDUCATION STUDENTS	
	CORRECT	INCORRECT	CORRECT	INCORRECT
Current Events(cont.)				
10. Name the country where U.S. Marines were recently killed.	30	70	68	32
11. Name the location where the first night space landing occurred.	5	95	14	86
12. Name the country where "Solidarity" has been outlawed.	43	57	72	28
Geography				
13. What countries border the United States?	40	60	76	24
14. On what continent is Egypt?	12	88	46	54
15. In what state is Cape Canaveral located?	21	79	54	46
16. Where is the capital city of Havana located?	17	83	69	31
17. Name the continent where Columbia is located.	26	74%	72	28

TABLE 4
PERCENTAGES OF CORRECT VOCABULARY ANSWERS BY CATEGORY

College Class	Categories of vocabulary: Definition	Context
Teacher education students	74	95
Developmental reading students	45	71